Fig. 1
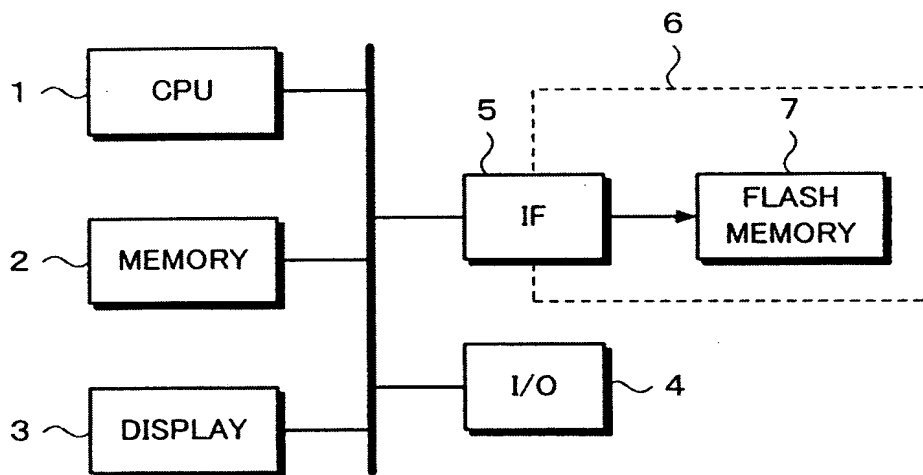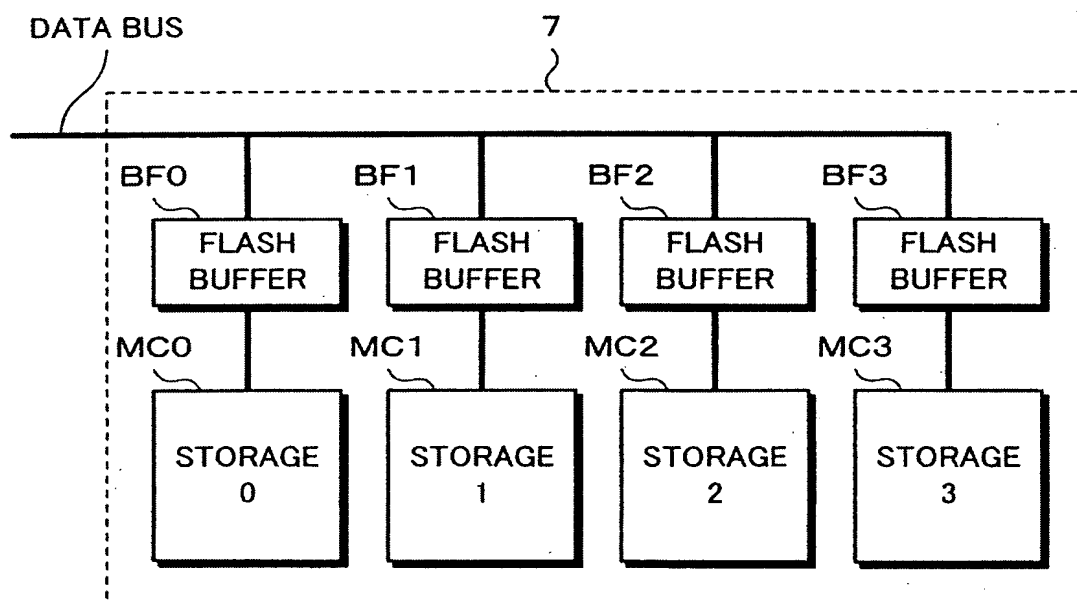

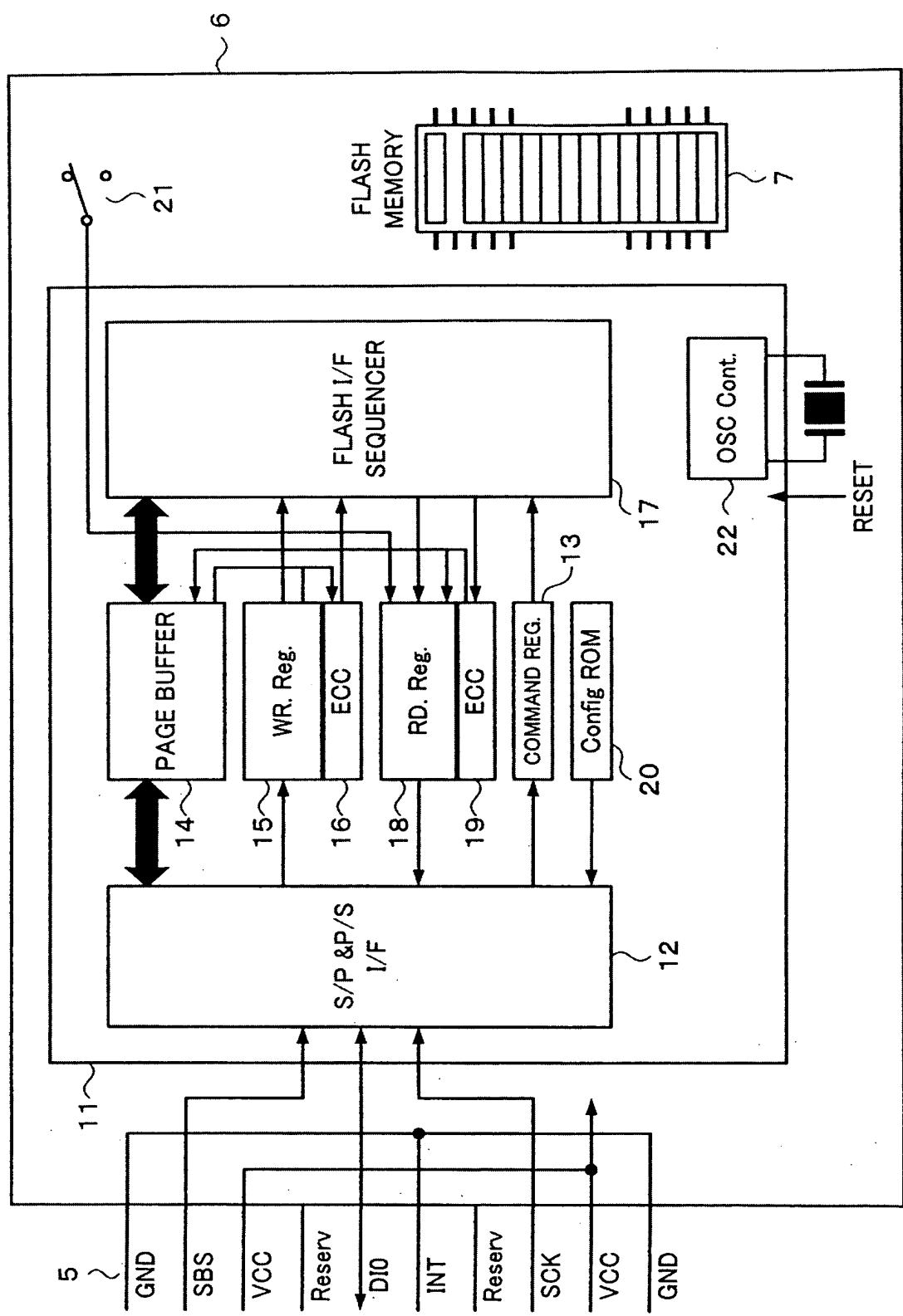# Fig. 2

Applicant(s): Kenichi Nakanishi et al.
Title: Recording System, Data Recording
Device, Memory Device, And Data
Recording Method

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Fig. 3

Fig. 4

A10 · · · · · · · · · · · · · · · A2	A1	A0
SEGMENT	SECTOR	STORAGE

Fig. 5

STORAGE 0   STORAGE 1   STORAGE 2   STORAGE 3

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Fig. 6

T:TRANSFER TIME

Fig. 7

READ BUSY

T:TRANSFER TIME

Fig. 8

S1 — FORM LOGICAL/PHYSICAL CONVERSION TABLE

S2 — SEND SECTOR 0

S3 — SEND SECTOR 1   S4 — WRITE SECTOR 0

S5 — SEND SECTOR 2   S6 — WRITE SECTOR 1

S7 — SEND SECTOR 3   S8 — WRITE SECTOR 2

S9 — WRITE SECTOR 3

5 / 14

Fig. 9

| STORAGE 0 | STORAGE 1 | STORAGE 2 | STORAGE 3 |

A[10,2]

CS0   CS1   CS2   CS3

40 ～ | 2 to 4 DECODER |

A1   A0

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Title: Recording System, Data Recording
          Device, Memory Device, And Data
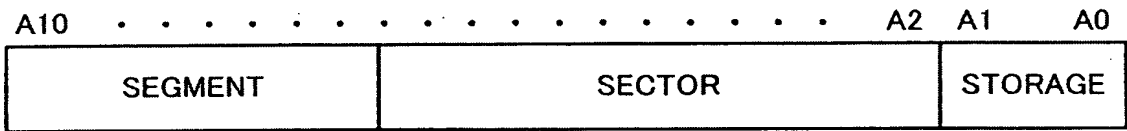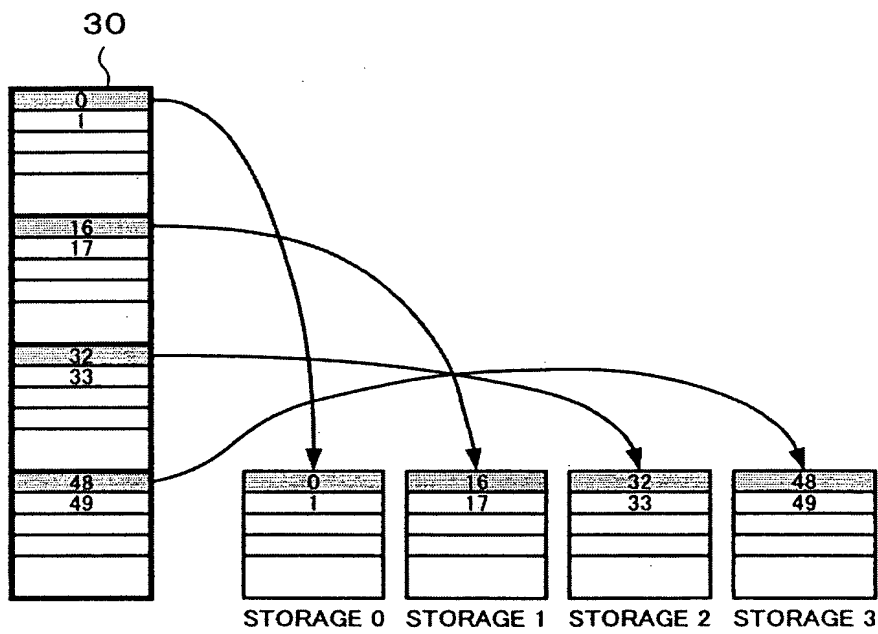   Recording Method
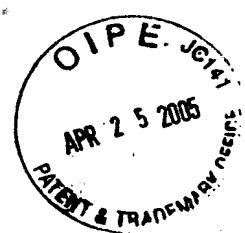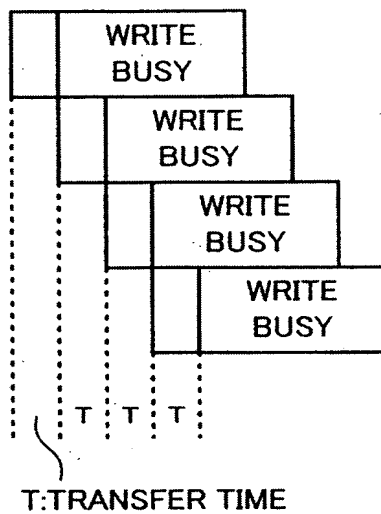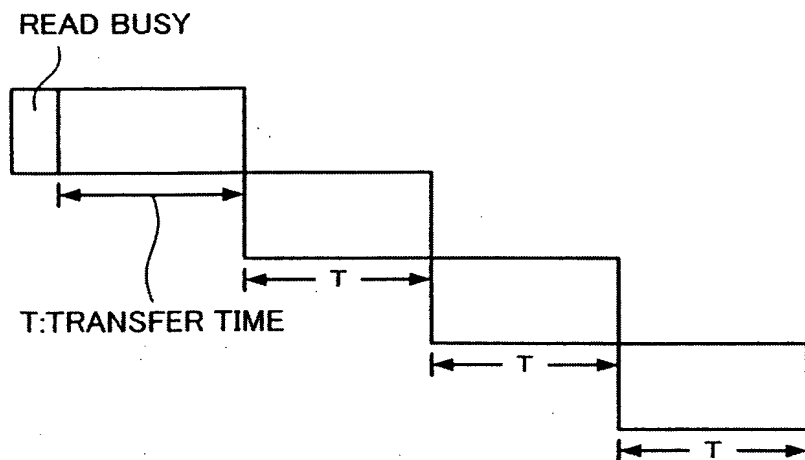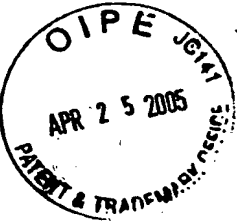
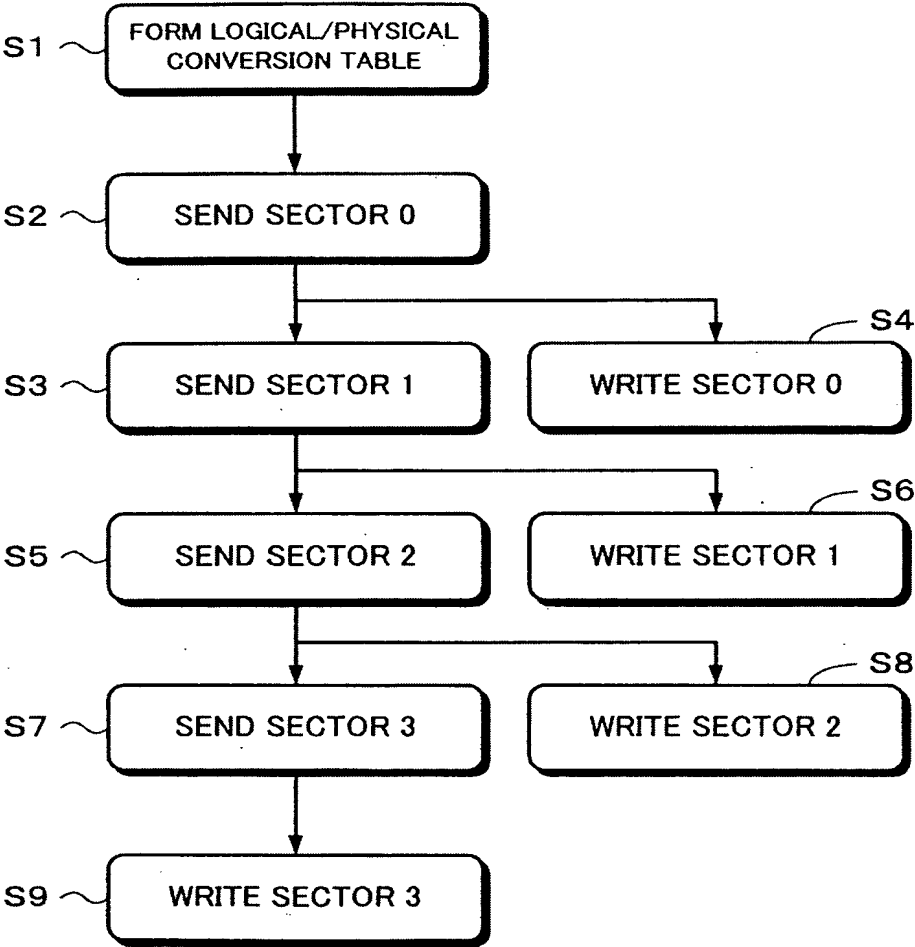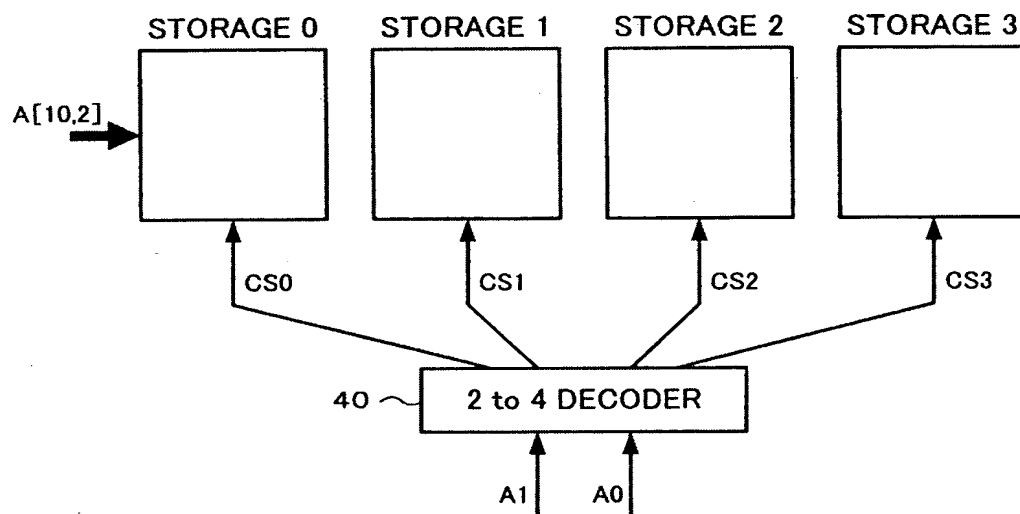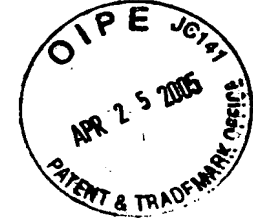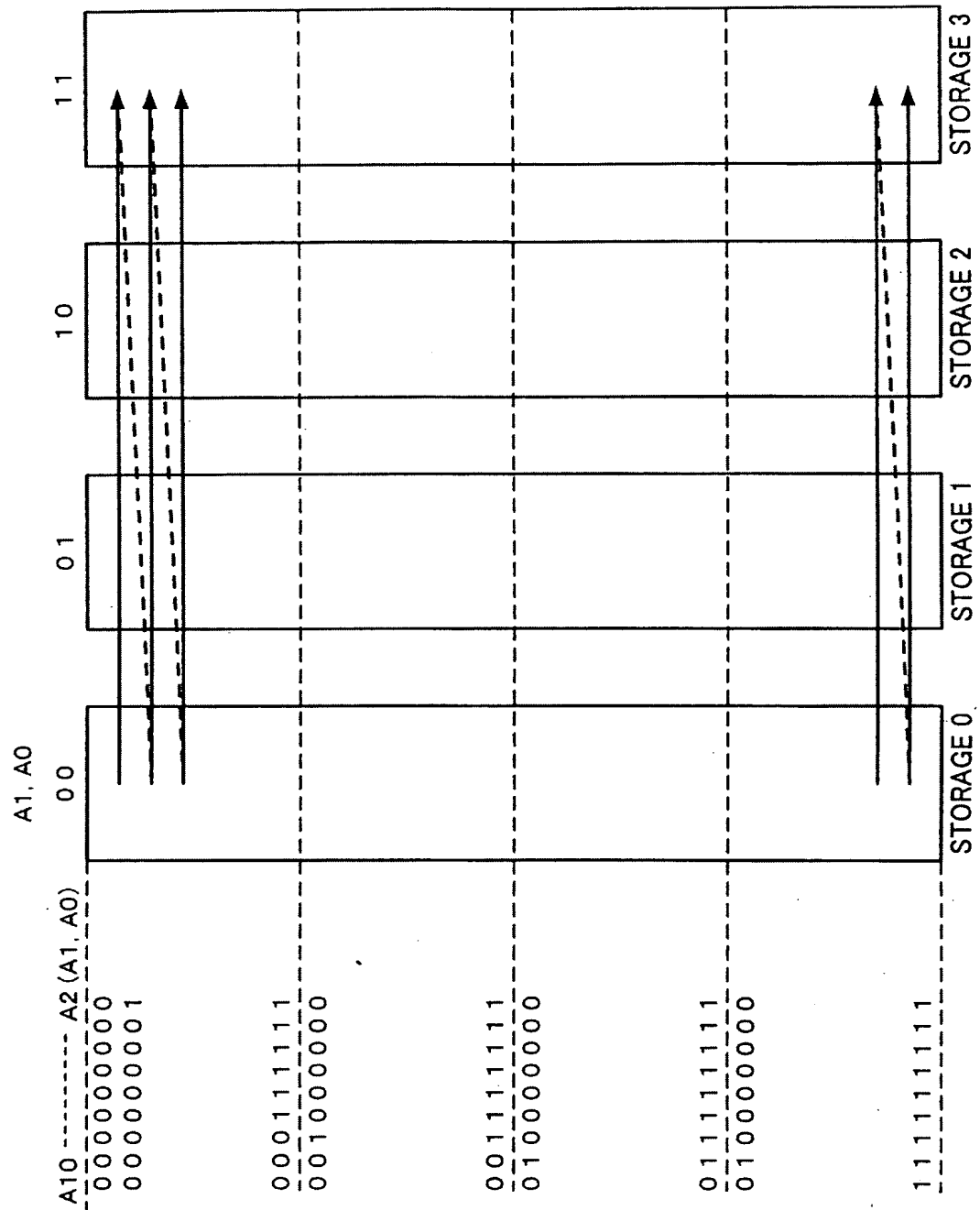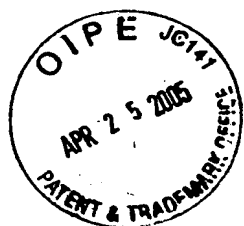Serial No.: 09/806,136

Fig. 10

Fig. 11

	STORAGE 0	STORAGE 1	STORAGE 2	STORAGE 3
SEGMENT 0	0x0000	0x0001	0x0002	0x0003
	0x0004	0x0005	0x0006	0x0007
	⋮	⋮	⋮	⋮
	0x01fc	0x01fd	0x01fe	0x01ff
SEGMENT 1	0x0200	0x0201	0x0202	0x0203
	⋮	⋮	⋮	⋮
	0x03fc	0x003fd	0x03fe	0x03ff
SEGMENT 2	0x0400	0x0401	0x0402	0x0403
	⋮	⋮	⋮	⋮
	0x04fc	0x04fd	0x04fe	0x04ff
SEGMENT 3	0x0600	0x0601	0x0602	0x0603
	⋮	⋮	⋮	⋮
	0x07fc	0x07fd	0x07fe	0x07ff

Fig. 12
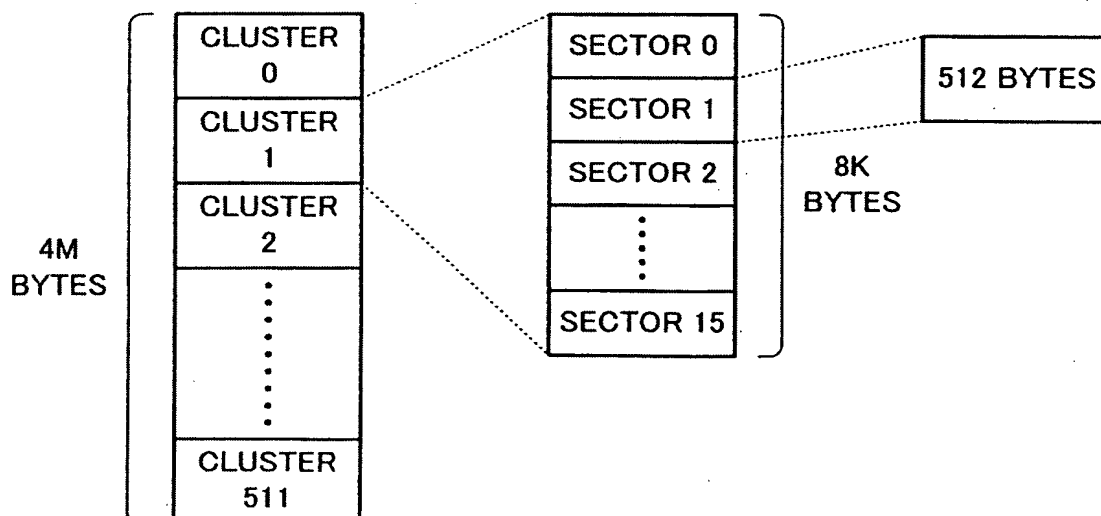
4M BYTES

| CLUSTER 0 |
| CLUSTER 1 |
| CLUSTER 2 |
| ⋮ |
| CLUSTER 511 |

8K BYTES

| SECTOR 0 |
| SECTOR 1 |
| SECTOR 2 |
| ⋮ |
| SECTOR 15 |

512 BYTES

Fig. 13A

	LOGIC ADDRESS	SEGMENT	LOGIC ADDRESS (LOGIC CLUSTER)
	0x0000	CLUSTER 0	0x0385
SEGMENT 0		CLUSTER 1	0x031f
	0x01ff		
	0x0200		
SEGMENT 1			
	0x03ff	CLUSTER 180	0x0200
	0x0400		
SEGMENT 2			
	0x05ff		
	0x0600	CLUSTER 511	0x0240
SEGMENT 3			
	0x07ff		

4M BYTES × 4
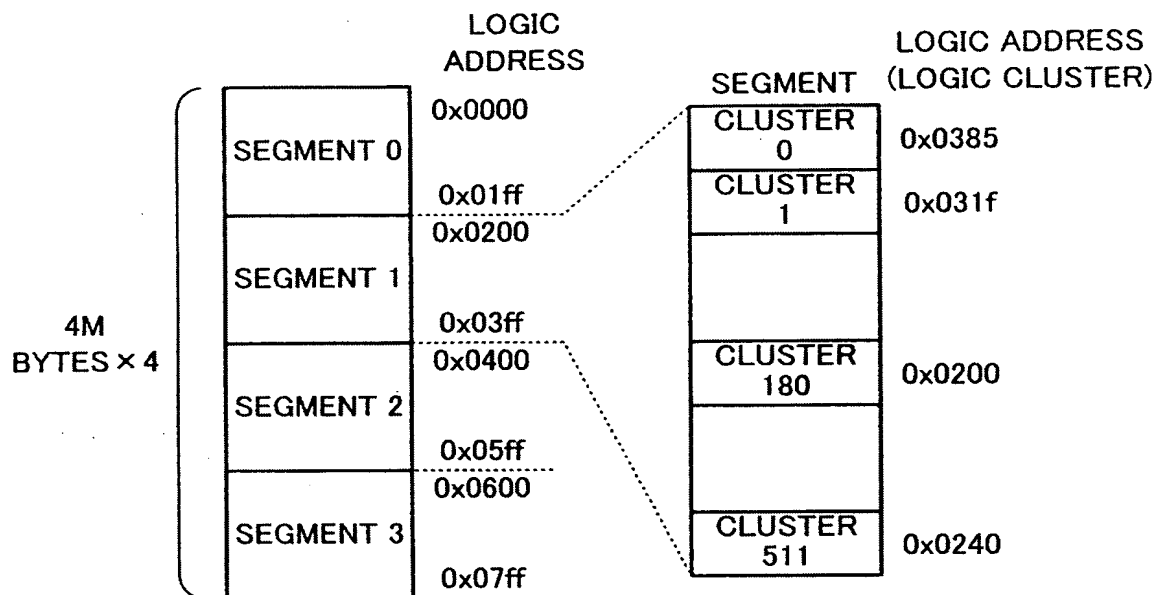
Fig. 13B

LOGIC ADDRESS	PHYSICAL ADDRESS
0x0200	180
0x0240	511
0x031f	1
0x0385	0

Fig. 14
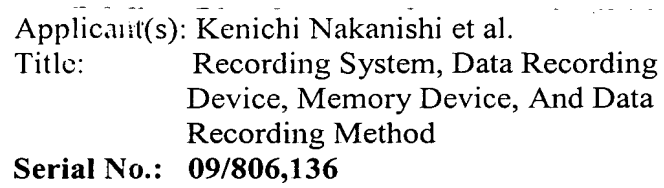
| A10 | A9 | A8 | · · · · · · · · · · · · · · · · | A0 |

STORAGE	SEGMENT	SECTOR

Fig. 15

	WRITE BUSY		WRITE BUSY		WRITE BUSY		WRITE BUSY

T:TRANSFER TIME

Fig. 16

READ BUSY   READ BUSY   READ BUSY   READ BUSY

	TRANSFER		TRANSFER		TRANSFER		TRANSFER

$\leftarrow T \rightarrow$

Fig. 17

S11 ⌇ FORM LOGICAL/PHYSICAL CONVERSION TABLE

↓

S12 ⌇ SEND SECTOR 0

↓

S13 ⌇ WRITE SECTOR 0

↓

S14 ⌇ SEND SECTOR 1

↓

S15 ⌇ WRITE SECTOR 1

↓

S16 ⌇ SEND SECTOR 2

↓

S17 ⌇ WRITE SECTOR 2

↓

S18 ⌇ SEND SECTOR 3

↓

S19 ⌇ WRITE SECTOR 3

Fig. 18

DATA (512 BYTES)	MANAGEMENT INFORMATION

16 BYTES

LOGIC CLUSTER NO.	CLUSTER MANAGEMENT INFORMATION	ATTRIBUTE INFORMATION

Fig. 19

STORAGE 0   STORAGE 1   STORAGE 2   STORAGE 3

A[8,0]

CS0   CS1   CS2   CS3

60 — 2 to 4 DECODER
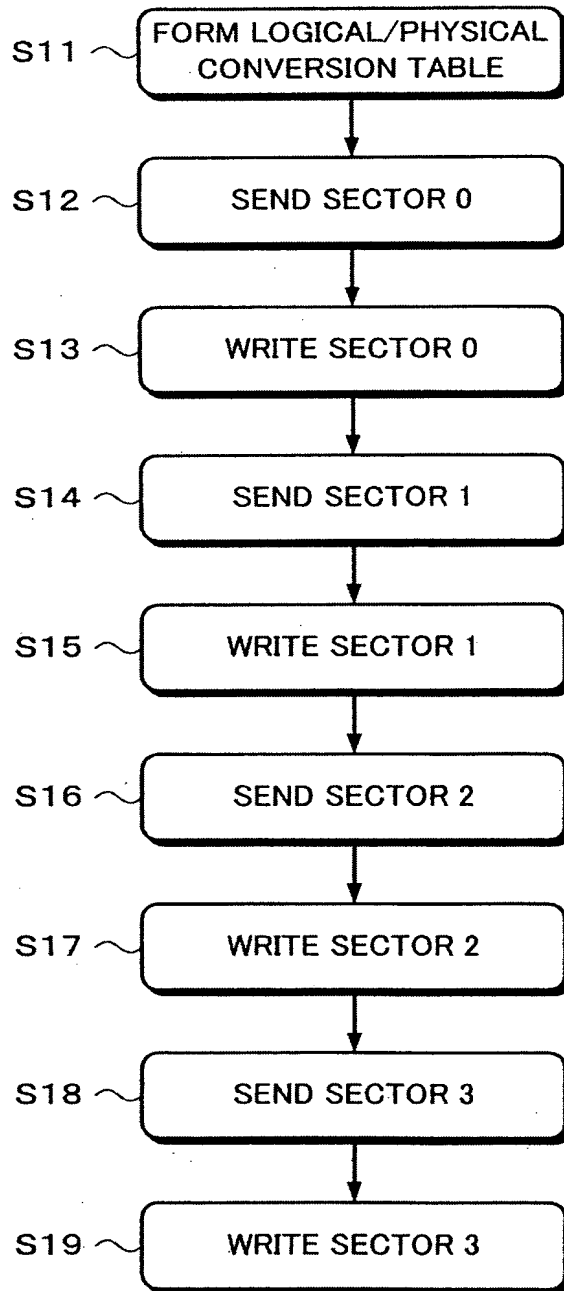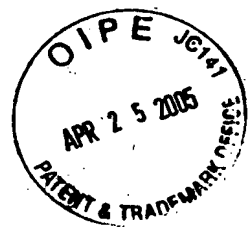
A10   A9

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Title: Recording System, Data Recording
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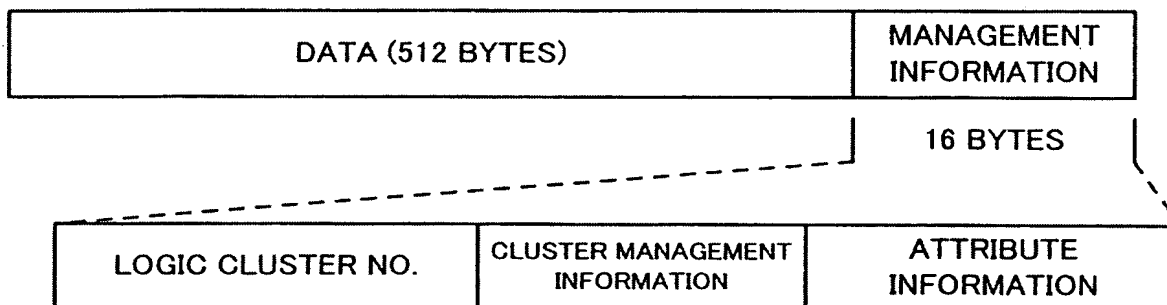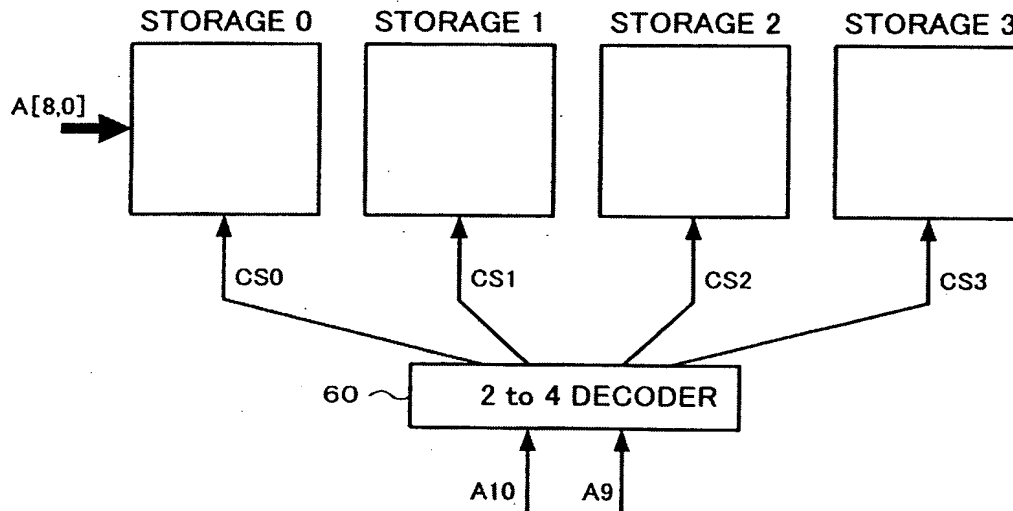   Recording Method
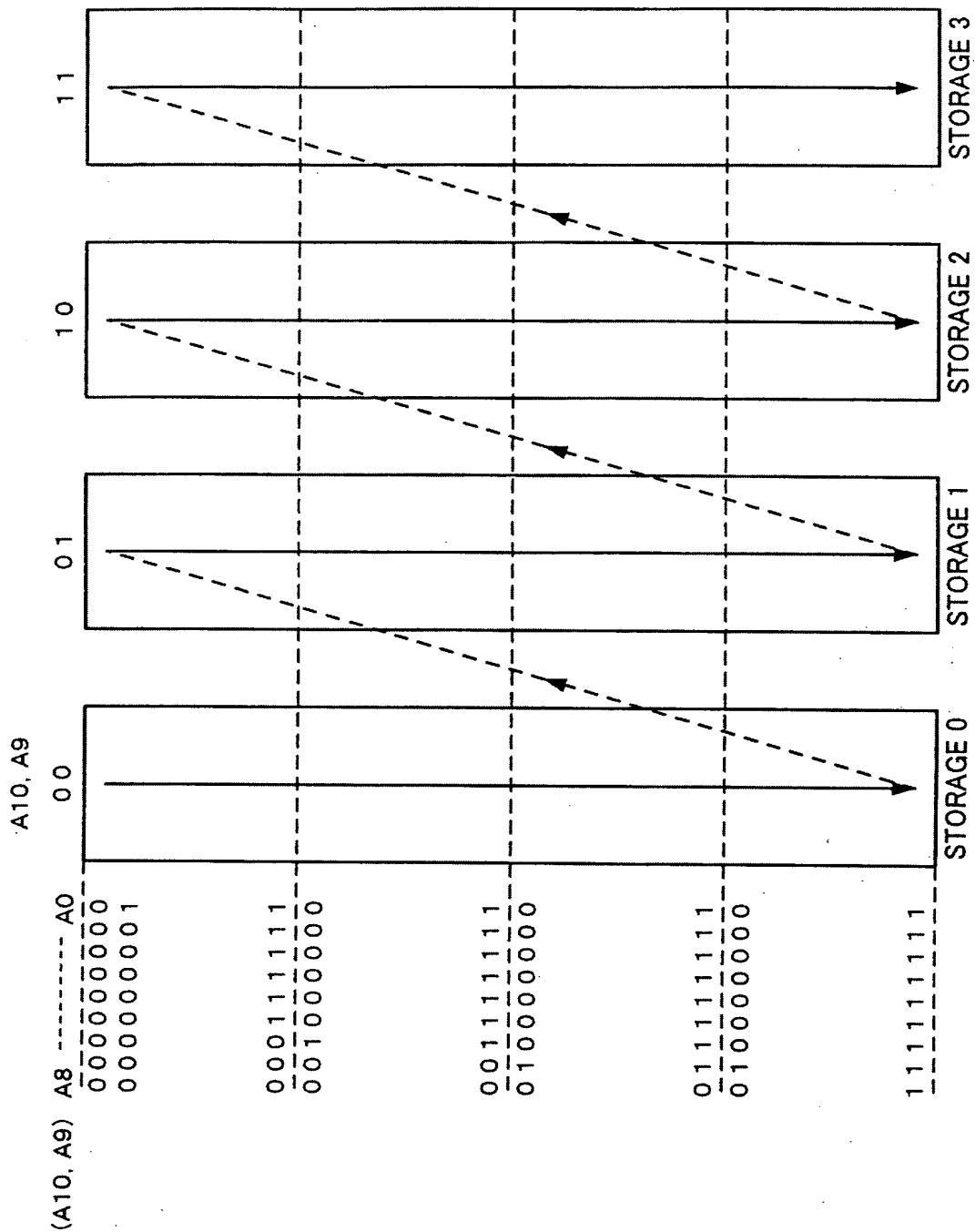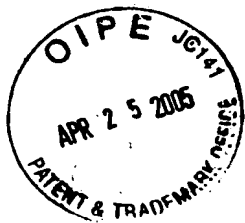Serial No.: 09/806,136

Fig. 20

STORAGE 0   STORAGE 1   STORAGE 2   STORAGE 3

A10, A9

0 0   0 1   1 0   1 1

(A10, A9) A8 ------- A0
           00000000
           000000001

           00011111
           001000000

           00111111
           010000000

           01111111
           010000000

           11111111

Fig. 21

STORAGE 0 SEGMENT 0	STORAGE 1 SEGMENT 1	STORAGE 2 SEGMENT 2	STORAGE 3 SEGMENT 3
0x0000	0x0200	0x0400	0x0600
0x0004	0x0204	0x0404	0x0604
0x0005			
0x0006			
0x0007			
0x01ff	0x03ff	0x05ff	0x07ff